

Operation Manual of the 3-in-1 Digital Camera (Clever Cam 360), A100

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I. System Requirement

- 1 Windows 98 / Windows 2000
- 2 P 200MHz (or equivalent) processor or faster
- 3 32 MB of RAM (64 MB recommended)
- 4 Video (VGA) card with 2MB of RAM for minimum 16 bit (High Color) Display
- 5 CD-ROM drive
- 6 An available USB port

II. Camera Specification

- 1 **Sensor type** : 1/7" Color CIF (352x288 pixels) CMOS image sensor
- 2 **Auto-exposure and Auto White-balance control**
- 3 **Image Performance for Video Stream** :
 - ** 8 fps for CIF, HI-resolution (352x288 pixels), approx. 12 seconds Video taking
 - ** 8 fps for QCIF, LO-resolution (176x144 pixels), approx. 45 seconds min. Video taking
- 4 **Memory & Images** : 64Mbit SDRAM Memory Storage
 - ** 100 +/-20 Pictures for CIF, HI Resolution
 - ** 400 +/-40 Pictures for QCIF, LO Resolution
- 5 **Dimension** : Height 128mm, Thickness 26mm, Width 35mm (lens and viewfinder inclusive); Net weight : 52gm excluding batteries
- 6 **Battery** : AAA 1.5V x 2 alkaline battery
- 7 **Battery Capacity** : with battery capacity indicator on LCD and automatic cut-off at 1.8V low voltage
 - ** During Power On : 3 hours Continuous, 70degF (Duracell MN2400 AAA alkaline battery at 2.2V Battery-Low voltage)

- ** During Power Off :** 600 hours Standby-by, 70degF (Duracell MN2400 AAA alkaline battery at 1.8V Battery cut-off voltage)
- ** With USB connection :** No battery consumption
- 8 Effective Lens Viewing Angle :** 46.5deg ; **Aperture :** Maximum F2.5 Automatic (Focal Length : 3.6mm, Fixed Iris)
- 9 Focusing Distance :** 0.5m min. to Infinity (**Maximum Distortion :** less than 4%)
- 10 Minimum Luminosity :** 10 Lux or above
- 11 Operating System Environment :** Windows 98 / Windows 2000
- 12 Interface Type :** USB
- 13 Storage Condition :** -4 to 131degF (-20 to 55degC); 20-85% R.H., non-condensing

III. Operating Environment

- 1 Operating Temperature :** 41 to 104degF (5 to 40degC)
- 2 20-85% Relative humidity, non-condensing**
- 3 Min. 10 Lux Outdoor / Tungsten lighting and Indoor Fluorescent lighting (with 50Hz or 60Hz AC frequency)**
- 4 Special Care Taking !!**
 - ** Never immerse any part of the Clever Cam 360 or its components into any fluid or liquid**
 - ** Remove dust or stains with a soft cloth dampened with water or neutral detergent**
 - ** Do NOT use any volatile chemicals or solvent such as thinner or benzene to clean the Clever Cam 360**
 - ** Do NOT use place hot items on the surface of the Clever Cam 360**
 - ** When the Clever Cam 360 is NOT to be used over a long period, take the batteries out**
 - ** Always keep the Clever Cam 360 in dry and cool dust-free place or container when it is NOT used**
 - ** Do NOT attempt to dissemble the Clever Cam 360**
 - ** Do NOT pull the Penclip with wide stress**
 - ** Avoid dropping the Clever Cam 360 to hard ground**

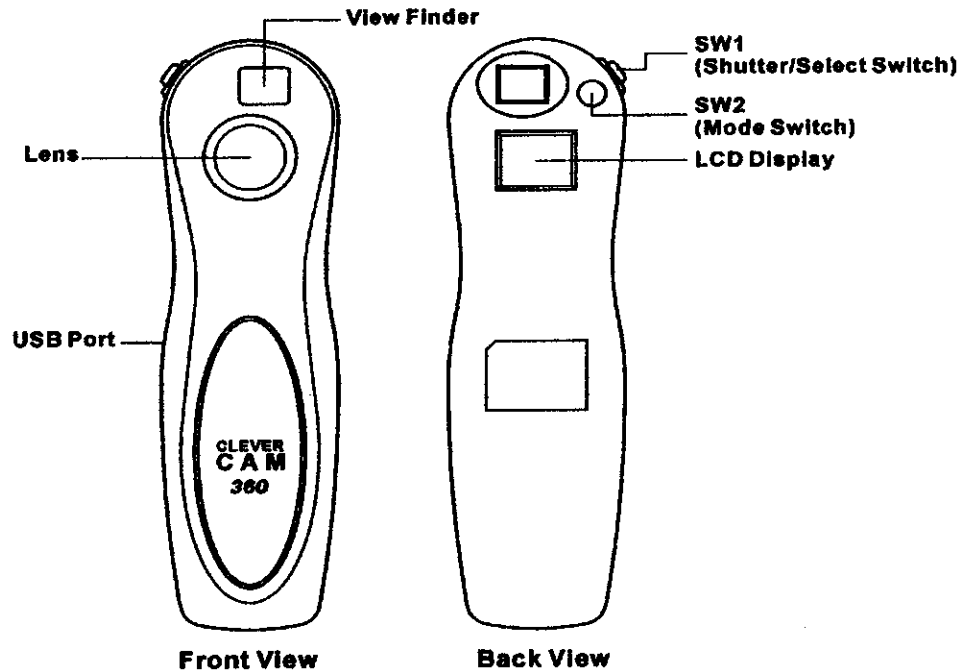
IV. Content Checklist

- 1 Clever Cam 360**
- 2 Application / Driver CDROM**
- 3 2 units of AAA alkaline batteries**
- 4 Front Clip**
- 5 Camera Stand**
- 6 USB Cable**
- 7 Instruction Book**

V. Operations

How to use Your Clever Cam 360

Introduction



- 1 The Clever Cam 360 is capable of taking and storing a minimum of 80 CIF (HI resolution) or 360 QCIF (LO resolution) picture images.
- 2 These Images can be Still and/or Video Stream Pictures and uploaded to a PC via the USB port using the USB cable supplied.
- 3 It can be used as a PC-camera using the USB cable connected to a PC.
- 4 It includes a LCD display panel to indicate Camera feature and Capture status to help you to select and set your desired operations.
- 5 For optimal capture exposure, you can select Outdoor or Indoor Environment lighting setting.
- 6 The selection of Still / Video Camera features will follow in the sequence below :-

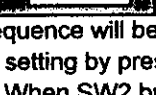
Seq.

A.



Camera Feature Status

Clever Cam 360 is switched on, Still picture capture in CIF, high resolution mode |

B.		High resolution mode
C.		Low resolution mode
D.		Outdoor capture environment
E.		60Hz fluorescent lighting capture environment
F.		50Hz fluorescent lighting capture environment
G.		Still picture capture mode, with Resolution Status
		
H.		Video picture capture mode, with Resolution Status
		
I.		Self-timer delayed Still picture capture mode, with Resolution Status
		
J.		Self-timer delayed Video picture capture mode, with Resolution Status
		
K.		Erase ALL pictures mode
L.		Erase LAST picture mode

The sequence will be repeated from A to L again when SW2 button is pressed before setting by pressing SW1 button.

- * When SW2 button is pressed, you will hear a clear beep tone and the next Feature Mode display on the LCD panel.
- * When SW1 button is pressed, you will hear 1 long beep tone as confirmation

with your selected Feature Mode display on the LCD panel.

- 7 PC mode will be automatically selected when your Camera is linked up with the PC via the supplied USB Cable
Indicating that the Clever Cam 360 is ready for PC to download images



- 8 You can select PC-Camera mode from the software when Clever Cam 360 is linked up with the PC via the supplied USB Cable.
Indicating that the Clever Cam 360 is ready for PC-Camera.



User Interface

- 1 The Clever Cam 360 has 2 switches on it.
 - ** SW1 is the Shutter / Set Button.
 - ** SW2 is the Mode select Button.
- 2 The LCD display is to show the Setting information and Camera function / Captures status.
- 3 The View Finder is to allow you to preview the approximate area of Capture.
- 4 The USB port is to allow you to operate the PC Camera and Captured images downloading via the supplied USB cable.
- 5 The Camera is bundled with a CDROM containing the Driver and Application Software
- 6 A Camera Stand is provided to keep the Camera handsfree standing firmly on desk top, particularly useful for PC Camera operation.

Installing Batteries

The Clever Cam 360 is powered by 2 AAA alkaline batteries, or via the USB cable when connected to a PC.

- 1 Grip the 2 sides of the Battery cover and pull it out from the bottom of the Clever Cam 360.
- 2 Unload the used batteries, if any, and insert 2 new batteries in the direction of the polarity indicator engraved.
- 3 Push the battery cover into the bottom until it is locked securely.
- 4 When "Battery LO" icon appears on the LCD panel, you will hear a 5 seconds warning beep tone for battery replacement before they are drained completely.

Note : When the batteries are unloaded or drained, all of your stored captures will be lost. It is therefore recommended that all stored captures should be uploaded to your PC and saved whenever possible to avoid accidental loss of images.

Switching the Clever Cam 360 On for Operation



- 1 Pressing the SW2 button when the LCD is blank will wake up the Clever Cam 360 and light up the LCD display.
- 2 The Clever Cam 360 always begins with High resolution Still Picture mode (A) after power on.
- 3 You can select other Feature modes by pressing SW2 button sequentially and set for operation by pressing SW1 button once.
- 4 To take optimal exposure, select Outdoor Capture / Tungsten lighting "" (D) or Indoor Capture "60Hz" (E) or "50Hz" (F), and press SW1 button to set.

- 5 The LCD display will show the Feature mode with number of images stored and Outdoor / Indoor and Battery status.
- 6 The Clever Cam 360 will automatically shut down after 30 seconds of inactivity and go to stand-by.

Taking a Still Picture



- 1 When the Clever Cam 360 is switched on, basic setting of Still image capture in very high resolution "HI" (CIF) is ready as default, press SW1, the Shutter button to take a picture.
- 2 Press SW2 button to select "HI" (B) for high resolution (CIF) or "LO" (C) for low resolution (QCIF), and press SW1 button to set.
- 3 Press SW1, the Shutter Button, when you are ready to take a picture. A clear beep tone will be generated to indicate a successful capture operation.
- 4 Dependent on the Brightness of the Capture environment, the Clever Cam 360 will automatically adjust the Shutter Speed before capturing the Still image.
- 5 The Shutter speed will vary from very High speed for very bright environment to about 2 seconds for dark environment; before the Capture is completed, the LCD will display Blank.
- 6 After a picture is captured, the LCD display will show "DDDz" being the latest total number of images captured in 3 digits.
- 7 When the memory is full, the LCD display will show "Full" and you cannot continue image capture until some or all pictures erased.

Note :

When capturing Still picture under insufficient brightness, hold the Clever Cam 360 firmly to take sharp capture due to the longer exposure time.

Video Camera mode



- Pictures may be taken continuously when "HVC", high resolution Video Camera or "LVC" low resolution Video Camera mode is set.
- 1 Press SW2 button until "VC" (H) is shown on the LCD and press SW1 button to set.
 - 2 Press SW2 button until "HI" (B) or "LO" (C) is shown on the LCD and press SW1 button to set your desired capture resolution.
 - 3 Press SW1 Shutter button to begin the video capture, press SW1 Shutter button again to stop the video capture operation.
 - 4 When Video Capture operation is completed, you will hear 2 beep tone and the LCD will display the Capture status again.
 - 5 After Video capture is completed, the LCD display will show "000z" being the latest total number of images captured in 3 digits.
 - 6 When the memory is full, the LCD display will show "Full" and you cannot continue Video capture until some or all pictures erased.

Self-timer delayed Still Capture



- This feature allows you to capture Still images with 10 seconds delay after Shutter operation.
- 1 Press SW2 button until "■" appears on the LCD (I and J), press SW1 button to confirm setting for delayed capture feature.
 - 2 To take delayed Still image capture, press SW1, the Shutter button, the LCD will flash for about 10 seconds and will generate a short beep when the Still image is captured.

- 3 After a picture is captured, the LCD display will show "DDDz" being the latest total number of images captured in 3 digits.
- 4 When the memory is full, the LCD display will show "Full" and you cannot continue image capture until some or all pictures erased.

Self-timer delayed Video Capture



This feature allows you to capture Video images with 10 seconds delay after Shutter operation.

- 1 Press SW2 button until "■" appears on the LCD (I and J), press SW1 button to confirm setting for delayed capture feature.
- 2 To take delayed Video capture, press SW1, the Shutter button, the LCD will flash for about 10 seconds and will generate a short beep when the camera starts the Video capture automatically.
- 3 When Video capture is finished or stopped manually, the Camera will generate 2 beep tone to indicate that delayed Video capture operation is completed.
- 4 After Video capture is completed, the LCD display will show "DDDz" being the latest total number of images captured in 3 digits.
- 5 When the memory is full, the LCD display will show "Full" and you cannot continue Video capture until some or all pictures erased.

Clearing the stored images



You can erase ALL or Last individual pictures one by one to give more memory for new images.

- 1 To clear ALL the stored pictures, press SW2 button until "EAL" (K) is shown on the LCD display and press SW1 button to erase ALL.
- 2 To clear the last stored picture, press SW2 button until "E01" (L) is shown on the LCD display and press SW1 button to erase the last picture stored.
- 3 After Picture erasure operation by step 1 or 2, the LCD display will show the number of pictures remaining in the stored memory.
- 4 You can erase more than 1 latest pictures by repeating step 2.
- 5 When ALL pictures are erased, the LCD display will show "000z" to indicate that there is no pictures in the memory.

Note : When you erase captured images, you must start with the LAST images and clear one by one.

Automatic Power Off

- 1 When there is no operation for 30 seconds, the Clever Cam 360 will generate 2 short beeps and switch off automatically to save power consumption. The LCD readout will disappear.
- 2 After using the Clever cam 360 from the USB Cable, it will switch off automatically to save power consumption.
- 3 Simply press SW2 button to switch on the Clever Cam 360 again.

How to Download Photo & Video to PC



A suitably configured PC must be used for downloading Still/Video images captured into the Clever Cam 360 with the supplied driver in the CDROM

under Windows 98 or Window 2000.

- 1 Connect the **Clever Cam 360** to the USB port of the PC via the supplied USB cable, the LCD display will show "PC-" and you will hear 1 short beep tone.
- 2 Click "**Photo Impression 2000**" and the Feature Menu appears on the PC.
- 3 Click "**Camera / Scanner**" ("acquire"), the "Down Load Camera Picture" window will appear with **Number of Total Picture**.
 - A Click "**Download**", the selected image will be downloaded to the PC; you can select the picture by changing the Picture index no.
 - B Click "**Download ALL**", all the captured images will be loaded to the PC.
 - C The downloaded images will be shown on 8-frames picture preview window in sequential order of your download operation.
 - D Click "**Close**" on completion of downloading operation, the PC will display the Feature Menu with the loaded images in the 8-frames picture preview window.
 - E You can click the "**Scroll Bar**" to preview other downloaded images. Place the Mouse Pointer to one of the image in the preview window, the selected image will be highlighted by a **yellow border**.
 - F To show the selected image to the **Main Screen**, click "**OK**"
 - G You can click the **Feature keys** in the sub-feature menu (on the right hand side) for different visual viewing effect.
 - H You can also **Edit, Create, Save or Print** the selected picture on the **Main Screen** by clicking the **appropriate key** on the left hand side.
- 4 When you finish, disconnect the **Clever Cam 360** from the supplied USB cable and it will automatically switch off.

Using it as a Live PC Camera



The **Clever Cam 360** can be used as a Live PC Camera together with a PC operating with the supplied driver in the CDROM under Windows 98 or Windows 2000.

- 1 Click "**Video Camera**", the LCD will show "**PC-CAM**", and the "Capture Image from Video Camera" window will appear with 5 function keys "**Source**", "**Format**", "**Live**", "**Capture**", and "**Done**" in the PC.
 - A Click "**Source**", the **8 Video Proc Amp properties** window will appear, each with 256 levels for adjustment (0-255) :-
 - a **Brightness**
 - b **Contrast**
 - c **Hue**
 - d **Saturation**
 - e **Sharpness**
 - f **Gamma**
 - g **White Balance**
 - h **Backlight Comp**The default setting is **128** and you may adjust the setting to your preferable setting for the best visual perception.
 - B Click "**Format**", **Video Stream Format Properties** window will appear.
 - a **Frame Rate** default setting "**364.007**" is shown.
 - b Output size default setting "**352 x 288**" is shown; "**176 x 144**" option is also available.

- C Click "Live", the Live Video Stream will appear on the PC.
 - D Click "Capture", the capture will be frozen as a picture image appearing on the PC.
 - E Click "Done" to exit from Video Camera and the LCD will show "PC-" again.
- 2 When you finish, disconnect the **Clever Cam 360** from the supplied USB cable and it will automatically switch off.

Using it for Video Recording and Playback



- 1 Double Click "Video Impression 1.6", the main menu will appear on the PC with "NEW", "EDIT", "SAVE" and "SEND" function buttons, and the LCD display will show "PC-".
- 2 Click "NEW", the Video Templates will appear on the PC showing "get", "acquire", "capture", "sort" and "delete".
 - A Click "get" to open selected files to retrieve filed Video Stream Images (.avi file) to Video Templates.
 - a To select the .avi file, place the mouse pointer to the corresponding Preview Frame in the Video Templates and click once to select the .avi file, a red border will be highlighted in the selected preview .avi file
 - b Click "add to Story Board", the selected .avi file will be paced onto the Story Board.
 - c Click "play movie", the main menu will appear on the PC with the first .avi file image ready to start appearing on the Main Screen.
 - d Click "Play" button, the movie(s) in order as appearing on the previous Story Board will be played back automatically in continuous stream sequentially.
 - e You can also click the "+" or "-" or move the Movie Status pointer to playback the Movie Stream manually.
 - f During the playback, the Movie Status pointer will move. When the playback is completed, the Main Screen will return to the first .avi file image.
 - B Click "acquire" for Still Images, the execution will be the same as that in "Photo Impression 2000".
 - a The downloading of the images begins from the First image to the Last image, and each these images will be shown onto the 15 frame Video Templates window.
 - b After clicking the First Image on the Video Templates, then move the mouse pointer to the Last Image and Shift Click, and then Click "add to story board".
 - c Click "play movie", the First image of the video stream stored in the Story Board will appear on the Main Screen.
 - d Click "Play" button to replay the retrieved .avi file.
 - e Click "sort", the 'Sort Album' window will appear and 5 options are available.
 - f Click "save" and enter file name and location, processing will be executed immediately.
 - g Click "get" to open selected files to retrieve filed Video Stream Images (.avi file) and input into the Video Templates following the last image (or file).
 - h Move the mouse pointer to any .avi file or any .jpg image on the 15 frame Video Templates and Double Left Click, the First image of the .avi file (or any .jpg image) will appear on the 5 frame Story Board and also the Main Screen.
 - i Click "Play" button to replay the retrieved .avi file.
 - j Click "edit movie", the highlighted image in the 5 frame Story Board will appear on the Main Screen,
 - 1) Move the mouse pointer to the Main Screen and Right Click, a window appears showing "Save as", "Revert", "Settings", "Print", "Print Setup", "Auto Rewind" (with a 'tick' as default) and "Help";

2) Click **"Settings"**, an **"Image Settings"** window appears showing default synchronized **Frame Rate**. You can enter different frame rate for Fast or Slow Motion setting.

k Click **"save"** and enter file name and location, **processing** will be executed immediately.

l Click **"get"** to open selected files to retrieve filed **Video Stream Images (.avi file)** and input into the **Video Templates** following the **Last image** (or file).

m Move the mouse pointer to any **.avi file** or any **.jpg image** on the 15 frame **Video Templates** and Double Left Click, the **First image** of the **.avi file** (or any **.jpg image**) will appear on the 5 frame **Story Board** and also the **Main Screen**.

n Click **"Play"** button to replay the retrieved .avi file.

C Click **"capture"**, the PC-cam images will appear on **Main Screen**. There are 4 function buttons **"Live"**, **"Record"**, **"Play"** and **"Pause"** and the LCD display will change to show **"PC-CAM"**.

a There are 5 feature buttons under the **Main Screen** **"Compress"**, **"Audio Setup"**, **"Disable Audio"**, **"Format"** and **"Picture properties"**.

b Click **"Record"** to store Live PC-cam images into **.avi file** temporarily inside the PC memory.

c Click **"Play"** button to playback the previously stored **.avi file** from the temporary .avi file inside the PC memory.

d Click **"save"** and enter your file name and folder location to save the **.avi file** suitably.

e A window will prompt you **"to add the saved file to an ablum?"**.

f To replay the saved .avi file from the ablum, repeat **"get"** to execute.

g Before disconnect the **USB Cable** from the **Clever Cam 360**, close the **"Video Impression 1.6"** to avoid hanging up the PC.

h When you finish, disconnect the **Clever Cam 360** from the supplied **USB cable** and it will automatically switch off.

CD ROM Application Software Installation

1 Place the supplied Bundled CDROM into your Computer and start Autorun

2 There are 3 Software packages installed :-

- | | | |
|---|-----------------------|--|
| A | Photo Impression 2000 | this is used to operate Still/Video Images and PC-camera downloading |
| B | Photo Fantasy 2000 | this is used to add user features for images enhancement |
| C | Video Impression 1.6 | this is used to play and edit movie streams |

F.C.C. Requirement

Product : Digital Camera/Clever Cam Model : SSP08

FCC Rules : Tested to comply with FCC Part 15, Class B
Operating Environment : For home or office use

Note : This equipment has been tested and found to comply with the limits for a class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions may cause harmful interference to radio communications.

However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures.

- Reorient or relocate the receiving antenna
- Increase the separation between the equipment and the receiver
- Connect the equipment to an outlet different from the one to which the receiver is connected
- Consult the dealer or an experienced radio/TV technician for help

Shielded cables must be used with this unit to ensure compliance with the Class B FCC limits.

Warning : Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

FCC ID : HTWSTA100-300